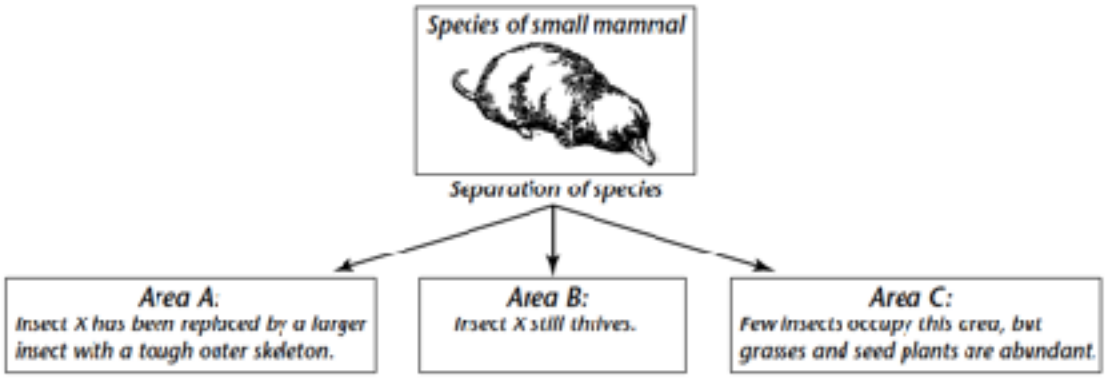
Predicting Change

Name: _____

Date: _____ Score: _____

Problem

A species of small mammal thrives on Insect X, which is abundant in the mammal's habitat. Then, different groups of the species suddenly become separated into three different areas, as shown in the figure below. How do you think each group will evolve?



Analysis:

1. For each group of the species, write a sentence that describes how conditions changed from the original area to the new area.

2. Predict how the conditions of areas A, B, and C will affect the evolution of the species. In your predictions, mention the factors that affect the process of natural selection.

Conclusion:

3. How would any changes in the mammal be passed on from generation to generation?

4. Which theory of how evolution occurs, gradualism or punctuated equilibria, better fits this case?

5. What could have caused the separation of the different groups?

6. Suppose the separation of this mammal species into three groups occurred 25 million years ago. What evidence might scientists use to infer what happened?